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JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2015-16/ Date: 06-01-2016

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to Road and Drain in Gangamma Temple Road, Amruthahalli in Ward No.07}

Ref.: Letter No. Testing/BUB/2015-16 dated 04-01-2016

Sample supplied to lab by: Sri.Prakash, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division. BBMP, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	**100.00**	100
45.00	**96.00**	95-100
26.50	**---**	-
22.40	**74.10**	60-80
11.20	**49.00**	40-60
4.75	**37.00**	25-40
2.36	**23.60**	15-30
0.600	**16.20**	8-22
0.075	**5.00**	0-8

*As Furnished by Client

The Results relate only to the items tested

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6/1/2016
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BUB/CTE/2015-16/ **Date: 16-01-2016**

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample (Semi Dense Bituminous Concrete-SDBC).
{Project*: Improvements to Road and Drain in Gangamma Temple Road, Amruthahalli in Ward No.07}

Ref.: Letter No. Testing/BUB/2015-16 dated 14-01-2016

Sample supplied to lab by: Sri.Prakash, Contractor,
Bangalore.

Report required for: Assistant Executive Engineer,
Kodigehalli Sub-Division.
BBMP, Bangalore.

TEST RESULTS:

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.08%**
2. **Gradation Test :**

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Specifications-2001 (Grading – 2)
13.2	**100**	100
9.5	**95.80**	90—100
4.75	**44.00**	35—51
2.36	**35.00**	24—39
1.18	**23.60**	15—30
0.3	**18.00**	09—19
0.075	**4.40**	03—08

* As furnished by Client.
The Results relate only to the items tested.

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16/01/2016
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JNANA BHARATHI
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BUB/CTE/2015-16/ **Date: 16-12-2015**

1. TEST REPORT ON REINFORCEMENT STEEL :

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Improvements to Road and Drain in Gangamma Temple Road, Amruthahalli in Ward No.07}

Ref.: Letter No. Testing/BUB/2015-16 dated 14-12-2015

Sample supplied to lab by: Sri.Prakash, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division. BBMP, Bangalore.

TABLE – 1

SL No	Details	For 10mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm
02	Observed Wt/m Length **Kg/m**	**0.621**	0.567
03	Proof stress/Yield stress, fy , **N/mm^2**	**556.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**19.60**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**628.0**	545.0

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The Results relate only to the items tested.

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JNANA BHARATHI
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BUB/CTE/2015-16/

DATE: 14-01-2016

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Improvements to Road and Drain in Gangamma Temple Road, Amruthahalli in Ward No.07}

Ref.: Letter No. Testing/BUB/2015-16 dated 13-01-2016

Sample supplied to lab by: Sri.Prakash, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division. BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20} (Drain)

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	16-12-15	13-01-16	28	22500	520	23.11	**23.33**
	002	"	"	"	"	530	23.55	
	003	"	"	"	"	525	23.33	

* As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2015-16/ Date: 06-01-2016

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to road and drain in Gangamma Temple road Amruthahalli in Ward No. ₹}

Ref.: Letter No. Testing/BUB/2014-15/ dated 04-01-2016
Sample supplied to lab by: Sri.Prakash, Contractor, Bangalore.
Report required for: Assistant Executive Engineer, Kodigehalli Sub-Division. BBMP, Bangalore.

TEST RESULTS

1. Gradation Test:

TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, IV Revision-2001
53.00	**100.00**	100
45.00	**96.30**	95-100
26.50	**---**	-
22.40	**74.00**	60-80
11.20	**46.00**	40-60
4.75	**36.00**	25-40
2.36	**24.00**	15-30
0.600	**18.70**	8-22
0.075	**5.00**	0-8

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**23.60%**	Not more than 30 %
2	Impact Value	----,,----	**25.30 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM

*As Furnished by Client

The Results relate only to the items tested.

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BUB/CTE/2015-16/

Date: 16-01-2016

TEST REPORT ON BITUMINOUS MIXES
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: Testing of Bitumen Premix Sample (Semi Dense Bituminous Concrete-SDBC).
{Project*: Improvements to road and drain in Gangamma Temple road Amruthahalli in Ward No.~~7~~}

Ref.: Letter No. Testing/BUB/2014-15/ dated 14-01-2016

Sample supplied to lab by: Sri.Prakash, Contractor, Bangalore.

Report required for: Assistant Executive Engineer,
Kodigehalli Sub-Division.
BBMP, Bangalore.

TEST RESULTS:

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.08%**
2. **Gradation Test** :

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-15 of MORTH Specifications-2001 (Grading – 2)
13.2	**100**	100
9.5	**95.70**	90—100
4.75	**48.00**	35—51
2.36	**36.00**	24—39
1.18	**23.70**	15—30
0.3	**18.00**	09—19
0.075	**4.70**	03—08

*As Furnished by Client

The Results relate only to the items tested.

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Date: 16-01-2016

TABLE 12 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness & Elongation Index	01	**24.30%**	Not more than 30 %
2	Impact Value	----,,----	**22.80 %**	Not more then 24.00 % for BC Not more then 27.00 % for DBM Not more then 30.00 % for BM/WMM
3	Water absorption	----,,----	**0.40%**	Not more than 1.0 %
4	Stripping test. (Coating and stripping of Bitumen aggregate mixtures)	----,,----	**97.10 %**	Minimum retained coating 95.0 %

*As Furnished by Client

The Results relate only to the items tested.

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